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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,329	06/08/2000	JEAN MORAND	39417/DBP	6928

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/581,329

Applicant(s)

MORAND ET AL.

Examiner

Geoffrey L. Knable

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004 and 23 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Note: Applicant is advised that the status identifier "original" used for claims 21, 25, 26 and 28-30 appears to be incorrect as these were not in fact original claims. This should be corrected in any future response (i.e. use "previously presented").
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 16-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 16 as amended, reference is made to a step of "preparing a deformable preform", this followed by a step of "maintaining the deformable preform wound on a periphery of a support..." This however raises some potential ambiguity in the scope of the claim as there does not seem to be any step of actually winding the preform on a support – in other words, it is not clear how it can be "maintained" if there is no previous description of it being wound but there is a description of its preparation, i.e. it is not clear whether the claimed method requires a step of winding.

Also, in new step (c), there is now some ambiguity in determining exactly what is contemplated by "for a tire carcass" – i.e. is this in reference to a defining feature of the support or a defining feature of the deformable preform. It is noted that the previous claim language defined the *preform* as "for a tire carcass" whereas the new language seems to imply that simply the *support* is for a tire

carcass (and thus that the deformable preform could in fact be any part of a tire even unrelated to the carcass) – is this the intended reading of the claim?

In claim 16, step (d), no antecedent has been established for “the tread area of the tire” – while this arguably would seem to be implicit in the reference to a tire, in light of the above noted ambiguity in determining what part of the tire the “deformable preform” corresponds to, it is not clear that there necessarily is a “tread area” for this “deformable preform” of undefined nature. For example, if one were to read the deformable preform as being in reference to a tire sidewall, then the reference to “the tread area” would render the claim confusing. It is suggested that the claim better define what the deformable preform comprises to help avoid this ambiguity.

In claim 16, it is still not considered that the scope of protection afforded by defining that the conductor is fixed “in a loose manner” can be adequately and readily ascertained. Applicant has argued that the artisan would read this term in light of the specification, i.e. that this allows at least a portion of the conductor to move relative to the preform so that it does not break during toroidal shaping. While it would be agreed that the specification does provide some indication of what the loose connection allows in the preferred processing, claim 16 is much broader in terms of the processing described and as such, it is still not clear that simply defining conductors fixed in a “loose manner”, without some additional indication of at least what this loose connection allows the conductors to do, provides a sufficient indication of the scope of the claims. Note for example that claim 16 does not describe or require any toroidal shaping step or even that the

support is cylindrical. Tires are sometimes built on already toroidally shaped cores, there being then only minor additional shaping/stretching in for example the tire mold (to form the grooves). In other words, without some further definition of this, it is not considered that the artisan is reasonably apprised of the scope of what is and is not a "loose" connection in the context of the broadly claimed method, the claim being therefore indefinite in this regard without more, it being stressed that it is extremely important in the context of the present invention to be able to determine what is and is not a conductor fixed in a loose manner. For example, how is one to know what is and is not a loose connection, it being noted that at least before curing, almost any wire element can be stripped from a green rubber support – is this sufficient to make it a loose connection? While applicant may in reality be referencing the loose fixing in the context of allowing the conductor to reorient from a zigzag path to a straightened path, the claim still provides no clear requirements in this regard, making this requirement for fixing in a loose manner still indefinite and confusing.

4. Claims 16-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann (US 5,479,171) taken in view of WO 90/12474 to Malmer et al.

These references are applied herein principally for the same reasons already of record. It is noted that normal, typical and obvious tire building includes application of the tire components to a drum (either cylindrical or already toroidal) followed by toroidal shaping (if originally cylindrical) or at least some additional shaping/stretching in the mold. Maintaining the materials wound on a drum followed by some stretching (toroidal shaping/ and/or shaping/stretching

during final molding) is thus considered obvious. The WO '474 reference to Malmer et al. is now also included in the rejection of claim 16-19 in light of the new recitation that the rectangular shaped loop of conductor is located under the tread area of the tire, it being applied for the same reasons as it was applied against claim 25 which required a location under the tread.

5. Applicant's arguments filed 2-2-2004 have been fully considered but they are not persuasive as regards any rejections that remain.

The 35 USC 112, first paragraph rejection has been withdrawn in light of applicant's response. Any 35 USC 112, second paragraph rejections not repeated have likewise been withdrawn in light of applicants response. Applicant's arguments with respect to fixing in a "loose manner" have been mostly treated within the statement of rejection above. It is again stressed that although the specification does describe this fixing in a manner that would be considered enabling, it does not seem to provide a sufficiently clear and unambiguous definition such that the scope of this term as used in a broadly defined method can be readily ascertained.

As to the prior art rejections, the rejection over Pollack et al. and DE '463 as well as that over Schuermann alone have been withdrawn in light of applicant's response. The remaining rejection will however be maintained. With respect to this rejection, it is argued that the cited references "show no appreciation of the problems associated with placing conductors under the tread" and do not teach overcoming these problems using a conductor fixed in loose manner. Again, however, it is not considered that a requirement for fixing in a

loose manner defines over that connection that would be present between the conductor and surrounding uncured rubber, a level of connection that would have been obvious following the reference teachings as applied to conventional tire building. The claims provide no further requirement that would define over this. For example, the claims are not considered to in any way define or require that the fixing is such that the conductor is allowed to straighten out with toroidal shaping from cylindrical to toroidal form. The claims do not even ever require that the carcass was initially in cylindrical form and further do not ever define or require that the claimed "stretching" requires toroidal shaping from cylindrical form. In fact, insofar as one of the suitable antenna locations taught by WO '474 is inclusive of the conductor being just above or even within the tire belt (a location consistent with the location for example defined in claims 16 and 25), the artisan would have understood that there would not be significant processing difficulties associated with a conductor in such location – note that, as well known, the tire belt (and tread) for modern radial tires is typically applied after toroidal shaping of the tire carcass (because of the relative inextensibility of the belt). There however is still some small shaping/stretching that occurs in the molding of the tire (e.g. to press the green tread into the tread mold pattern forming elements) – such is entirely consistent with the present broadly defined "stretching in an outward general direction." Applicant's arguments assume a level of processing detail that is not a feature of the present very broadly defined claims.

Applicant also points out that Schuermann refers to WO '474 to Malmer at col. 1 and suggests that it has drawbacks and is less mechanically reliable and more difficult to manufacture. While such a disclosure is acknowledged, this disclosure is principally in reference to the WO '474 requirement for electrical contact between the IC and the antenna and the problems resulting therefrom. There is no indication that the antenna locations disclosed as suitable in WO '474 in any way contribute to these drawbacks or difficulties and as such, it is again submitted that the artisan would have understood that various antenna locations, including under the tread area, are known to be suitable and effective in this art and would have been expected to have been amenable to the coupling method of Schuermann as opposed to direct connection. Note also that Schuermann is most concerned with the fact that the antenna is located circumferentially on a tire (e.g. note claim 13 of the patent), not any particular antenna location and in fact describes the WO '474 antenna location using similar language – i.e. “an antenna routed about the tire’s circumference” (col. 1, lines 39-40).

It is also argued that when a tire is manufactured,

“stretching problems are more important in the tread area in comparison to the sidewall of the tire. Thus, it would not have been obvious to simply reposition the Schuermann conductor from the sidewall to the tread area since repositioning the conductor would, for example, adversely affect the manufacturing process because the periphery of the tire is a very sensitive portion during manufacture. Manufacturers do not accept modifications in that manufacture, unless they can be reasonably sure that it does not change the mechanical properties of the tire, which of course have the utmost priority.”

This argument has been carefully considered but is unpersuasive.

Although it is not entirely clear what applicant is referring to as “stretching

problems", it would be agreed that for a cylinder or "flat" built tire, when it is toroidally shaped, the tread area undergoes the greatest radial expansion. However, the tread and belt components of the tire (and thus the conductor at some of the suitable locations taught by WO '474 as already noted) are not added until after the tire carcass is toroidally shaped – such processing however would still read on the present claims insofar as there is still typically some expansion or outward "stretching" that occurs during the final molding of the green tire. It should also again be noted that tires need not be built flat, i.e. on a cylindrical drum, but rather can also conventionally be built on a toroidally shaped drum – significant "stretching" in the crown area of even the carcass plies themselves would thus not be a problem for such a conventional alternative building methodology (but an outward stretching consistent with that claimed would still be typical for such a tire during the final molding). Most importantly, claim 16 only very broadly defines the method of building the tire, there being (1) no indication of any specifics or even what type of the tire building processing that is adopted; (2) no clear specific indication of what tire components the various "performs" represent; (3) no clear indication of what tire building step the claimed "stretching" represents; and (4) no clear indication of what the "loose" manner requires or defines and how or even whether it has any functional relationship with the rest of the method. As such, the ordinary artisan practicing the claimed method would not even necessarily be faced with significant problems that might break a conductor – i.e. applicant is referring to a problem that is peculiar to a particular location for the conductor relative to the various tire

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plies in the context of a particular tire building processing scheme – such particulars are however not features of the present claims and thus the arguments pertaining thereto are unpersuasive and the claims are considered obvious for reasons noted above and in the statement of rejection.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

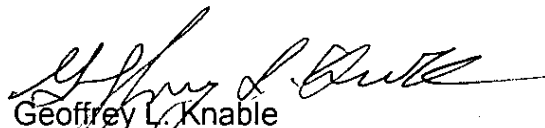
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
6/13/04